

Table 2.0-1. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Used for Risk Evaluation (Y/N)	Survey ID	Study Objective	River Mile(s)	Begin Date	End Date	Number of Samples	Sample Intervals (cm)	Composite (Y/N)	Dredged (Y/N)	Capped (Y/N)	QA Category
Sediments												
Downtown Portland Sediment Characterization	N	WLLASE08	Sediment characterization	12 - 16	5/12/2008	6/10/2008	81 surface sediment, 36 subsurface	surface 0 - 40 cm, subsurface to 378 cm	N	N	N	Category 1 QA2
Gasco EE/CA	Y <sup>a</sup>	WLCGSG04	Early action characterization	6.5	7/19/2004	9/9/2005	16 subsurface sediment	up to 610 cm	N	N	Y - RAA-02-20	Category 1 QA2
2005 Portland District O&M Sediment Characterization	Y	WLCDRD05	Dredged material characterization	2 - 11.7	4/28/2005	5/27/2005	82 surface, 72 subsurface	surface 0-30 cm, subsurface to 421 cm	N	N	Y - WR-PG-50, WR-VC-50	Category 1 QA2
ExxonMobil Beach Sediment Sheen Samples	N	WLCEMH04	Oilly sheen investigation	5.16	10/6/2003	8/13/2004	4 surface sediment	0-15 cm	N	N	N	Category 1 QA1
Terminal 4 Early Action EE/CA Report	Y	WLCT4C04	Early action characterization	4.5	3/3/2003	5/20/2004	5 sediment trap, 43 subsurface sediment	up to 671 cm	Y	N	N	Category 1 QA2
Corps Dredged Material O&M Characterization	Y <sup>a</sup>	WLCDRI03	Dredged material characterization	3, 8-10, 15, 23	9/18/2003	9/25/2003	19 subsurface composites, 2 surface reference	up to 305 cm	Y	N	N	Category 1 QA2
Gunderson Area 2 Sandy Beach	N	WLCGNG03	Gunderson, Inc. Area 2 - sandy beach area upland source evaluation	9	7/8/2003	7/8/2003	4 surface sediment	0-15 cm	N	N	N	Category 1 QA1
International Terminal Sediment Data Report	N	WLCITC03	Dredged material characterization	4, 5	3/11/2003	3/13/2003	20 subsurface sediment	up to 518 cm	N	Y	N	Category 1 QA1
ATOFINA Phase 2 Stage 1/2 In-River Investigation	Y <sup>a</sup>	WLCEAF02	Phase 2 Stage 1 & 2 in-river groundwater and sediment investigation	8	6/3/2002	3/10/2003	211 subsurface sediment	up to 1,305 cm	N	N	N	Category 1 QA2
City Outfall Source Control Investigation	Y	WLCOFJ02	Source control investigation	5-10	10/14/2002	10/23/2002	84 surface sediment	0-15 cm	N	N	Y - Station 4	Category 1 QA2
Surface Water, Sediment, and Groundwater Sampling Report	N	WLCMBI02	Surface water, sediment, and groundwater sampling, McCormick & Baxter	7, 8	9/5/2002	9/26/2002	41 water grabs, 19 water SPMD, 11 subsurface sediment	30-35 cm	N	N	Y - 14 samples	Category 1 QA2, petroleum Category 2
US Moorings RI Sediment Investigation	Y	WLCMRI02	US Moorings remedial investigation	6, 7	9/10/2002	9/11/2002	2 surface, 3 subsurface sediment	0-30, 0-90 cm	Y	N	N	Category 1 QA2
City Outfall Pilot Project	Y	WLCOFH02	Sediment quality study off Outfalls M1 and 18 (9 sediment grabs taken at each outfall)	9	8/21/2002	8/23/2002	18 surface sediment	0-15 cm	N	N	N	Category 1 QA2
MarCom Expanded Preliminary Assessment	N	WLCMCB02	Expanded preliminary assessment of MarCom property	6	2/8/2002	2/8/2002	3 surface sediment	0-15 cm	N	N	N	Category 1 QA1
GATX Linnton Terminal RI	N	WLCGXB02	Kinder Morgan Linnton facility remedial investigation	5	2/5/2002	2/7/2002	2 surface sediment	0-15 cm	N	N	N	Category 1 QA1
T4 Slip 3, Berth 410 Dredge Material	N	WLCT4L01	Marine Terminal 4 Slip 3 dredge material characterization study	5	12/11/2001	12/13/2001	9 subsurface sediment	up to 213 cm	Y	Y	N	Category 1 QA1
Willamette Reference Area Phase 2	N	WLLRSI01	Phase II reference area reconnaissance study	16, 19, 23, 24	9/17/2001	9/17/2001	8 surface sediment	0-10 cm or 0-30 cm	N	N	N	Category 1 QA1
Willamette Reference Area Phase 1	N	WLLRSH01	Phase I reference area reconnaissance study	16, 17, 18, 19, 24	8/29/2001	8/29/2001	9 surface sediment	0-10 cm	N	N	N	Category 1 QA1, grain size Category 2
Cargill Irving Elevator Permit Applications	N	WLCCIF01	Dredged material characterization	12	6/29/2001	6/29/2001	5 subsurface, 1 subsurface pore water	up to 109 cm	Y - 1 sample	Y	N	Category 1 QA1
T2/T5 2001 Dredge Characterization Study	N	WLCT0F01	Dredged material characterization	2, 10	6/27/2001	6/29/2001	4 subsurface pore water, 7 subsurface sediment	up to 182 cm	Y	Y	N	Category 1 QA1
Chevron Dredging Permit Application	N	WLCCPF01	Dredged material characterization	8	6/6/2001	6/7/2001	15 subsurface sediment	up to 244 cm	N	Y	N	Category 1 QA1
Gasco Source Control Evaluation	Y	WLCGSD01	Characterization of nearshore conditions to validate groundwater modeling predictions	7	4/10/2001	4/11/2001	18 subsurface sediment, 9 surface sediment	surface 0-10 cm, subsurface to 40 cm	N	Y	Y - AN-2-1 to 2-4	Category 1 QA2
McCormick & Baxter RI Phase 4	N	WLCMBA01	Phase IV remedial investigation of McCormick & Baxter Creosoting Co.	8	1/5/2001	2/5/2001	32 subsurface sediment, 1 upriver reference surface sediment	0-38 cm	N	N	Y - 13 samples	Category 1 QA1
Goldendale Aluminum Phase 2	N	WLCGAL00	Post-dredge residual check	11	12/21/2000	12/21/2000	4 surface sediment	0-30 cm	N	N	N	Category 1 QA1
Oregon Steel Mills Pre-Remedial Investigation Field Activities Data Report	N	WLCOSJ00	Pre-remedial investigation; sediments collected off outfalls to investigate storm water as potential pathway	2, 3	10/10/2000	10/11/2000	1 subsurface sediment, 15 surface sediment	surface 0-10 or 0-30 cm, subsurface 0-60	N	N	N	Category 1 QA1

DO NOT QUOTE OR CITE

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Table 2.0-1. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Used for Risk Evaluation (Y/N)	Survey ID	Study Objective	River Mile(s)	Begin Date	End Date	Number of Samples	Sample Intervals (cm)	Composite (Y/N)	Dredged (Y/N)	Capped (Y/N)	QA Category
Willbridge 60-in Outfall	N	WLCWTI00	Remedial investigation of sediments at 60-inch outfall location, Willbridge Terminal	8	9/21/2000	9/22/2000	13 subsurface sediment	up to 229 cm	N	N	N	Category 1 QA1
UP RR Albina Yard Expanded Preliminary Assessment Data Report	N	WLCAYH00	Expanded preliminary assessment of UPRR's Albina Yard	11, 12	8/9/2000	8/17/2000	3 subsurface sediment, 6 surface sediment	surface 0-20 cm, subsurface to 69 cm	N	N	N	Category 1 QA1
Marine Finance Expanded Preliminary Assessment Data Report	N	WLCMFH00	Expanded preliminary assessment of Marine Finance Site	6	8/8/2000	8/9/2000	3 subsurface sediment, 6 surface sediment	surface 0-20 cm; subsurface to 66 cm	N	N	N	Category 1 QA1
T1 South Sediment Study	N	WLCT1F00	Baseline sediment investigation associated with potential lease arrangement	11, 12	6/22/2000	6/22/2000	9 surface pore water, 9 surface sediment	0-10 cm	N	N	N	Category 1 QA1
Goldendale Aluminum Phase 1	N	WLCGAF00	Dredged material characterization	11	6/12/2000	6/12/2000	5 surface sediment, 1 reference surface sediment	0-30 cm	N	Y	N	Category 1 QA1
Ross Island Phase I (Port)	N	WLCRIL99	Phase I remedial investigation of Ross Island Lagoon	15, 16	11/2/1999	4/28/2000	6 subsurface pore water, 20 subsurface sediment, 38 surface pore water, 41 surface sediment, 4 surface reference sediment	surface 0-10 cm, subsurface up to 1,798 cm	Y - 1 sample	N	N	Category 1 QA1
Willamette November Sediment Quality Evaluation	N	WLR1199	Dredged material characterization	9, 10, 12	11/29/1999	11/29/1999	9 subsurface sediment, 7 subsurface pore water, 1 surface sediment	surface 0-15 cm, subsurface up to 386 cm	N	N	N	Category 1 QA1, metals & conventionals Category 2
T5 1999 Berths 501-503 Sediment Characterization Study	N	WLCT5K99	Dredged material characterization	1, 2	11/22/1999	11/22/1999	5 subsurface sediment, 5 subsurface pore water	up to 182 cm	Y - 2 samples	Y	N	Category 1 QA1, grain size Category 2
Ross Island Lagoon Baseline	N	WLCRIJ99	Baseline sediments investigation of Ross Island Lagoon	16	10/26/1999	10/28/1999	4 surface pore water, 12 surface sediment	0-10 cm	Y - 1 sample	N	N	Category 1 QA1
Ross Island Phase 1 (Ross Island Sand & Gravel)	N	WLCRIV99	Phase I remedial investigation of Ross Island Lagoon	15, 16	10/7/1999	10/28/1999	4 surface sediment, 41 subsurface sediment	surface 0-10cm, subsurface up to 79 cm	N	N	N	Category 1 QA2
GATX Linnton Terminal ESA	N	WLCGXV99	Environmental site assessment	5	10/8/1999	10/8/1999	4 surface sediment, 4 subsurface sediment	surface 0-10 cm, subsurface to 40 cm	N	N	N	Category 1 QA1
McCormick & Baxter RI Phase 3	Y	WLCMBJ99	Phase III remedial investigation of McCormick & Baxter Creosoting Co.	8	10/1/1999	10/1/1999	44 site and 4 upriver reference surface sediment	0-15 cm	N	N	Y - 30 samples	Category 1 QA2
Willamette April Sediment Quality Evaluation	N	WLR0499	Dredged material characterization	3, 9, 10	4/29/1999	4/29/1999	11 subsurface sediment, 3 pore water	up to 434 cm	N	N	N	Category 1 QA1, metals & conventionals Category 2
Portland Harbor Sediment Investigation	Y	WR-WSI98	EPA's sediment inspection	4 - 10	9/17/1997	2/2/1999	158 surface sediment, 28 surface pore water, 39 subsurface sediment	surface 0-10 cm, subsurface 0-90 cm	Y - 12 samples	Y - SD029, SD032	Y - SD76, 79, 82, 64, 65	Category 1 QA2
TOSCO 1999 Sediment Sampling Results	Y <sup>a</sup>	TOSCO99	Dredged material characterization	8	1/20/1999	1/22/1999	4 subsurface sediment, 1 surface reference	up to 304 cm	Y	N	N	Category 1 QA2
Elf Atochem 1999 Willamette River	N	WLRELF99	Sediment investigation of Atofina shoreline	8	11/23/1998	1/20/1999	15 subsurface sediment, 13 surface sediment	surface 0-10 cm, up to 90 cm	N	N	N	Category 1 QA1
Willbridge Terminal Facility RI	N	WLRWTF98	Remedial investigation of Willbridge Terminal	8	12/17/1998	12/18/1998	15 surface sediment	0-12.7 cm	N	N	N	Category 1 QA1
T2/T4 Sediment Study	N	PPTLDT24	Dredged material characterization	6, 10	9/15/1998	10/15/1998	3 subsurface pore water, 3 subsurface sediment	0-91 cm	Y	Y	N	Category 1 QA1, grain size Category 2
Port of Portland T4 RI	N	WLCT4J98	Remedial investigation of Terminal 4	5	10/12/1998	10/15/1998	18 subsurface sediment, 44 surface sediment, 2 surface reference sediment	surface 0-10 cm, subsurface up to 128 cm	N	N	N	Category 1 QA1
Sediment Characterization Local Sponsors' Berths (conducted with Corps)	N	WLCT0198	Dredged material characterization of Port of Portland berths	2, 5-8, 10-12	9/14/1998	9/14/1998	7 subsurface pore water, 7 subsurface sediment, 12 surface pore water, 12 surface sediment	surface 0-10 cm, subsurface up to 152 cm	Y - 6 subsurface	N	N	Category 1 QA1

DO NOT QUOTE OR CITE

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Table 2.0-1. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Used for Risk Evaluation (Y/N)	Survey ID	Study Objective	River Mile(s)	Begin Date	End Date	Number of Samples	Sample Intervals (cm)	Composite (Y/N)	Dredged (Y/N)	Capped (Y/N)	QA Category
International Terminals Sediment Sampling Event	N	WLCITH98	International Terminals sediment sampling event	4	8/18/1998	8/18/1998	5 surface sediment	0-15 cm	N	N	N	Category 1 QA1
Portland Shipyard Sediment Investigation	Y	PSYSEA98	Sediment investigation to characterize distribution of chemicals in surface and subsurface sediments, supporting property transfer	8, 9, 10, 11	3/31/1998	4/16/1998	65 subsurface sediment, 60 surface sediment, 61 surface pore water, 3 surface reference	surface 0-10 cm, subsurface to 490 cm	N	N	N	Category 1 QA2, conventionals QA1
Portland Shipyard Environmental Audit	Y	PSYD&M97	Sediment investigation to identify chemicals in the vicinity of the shipyard and their distribution	9	11/26/1997	1/22/1998	4 subsurface sediment, 8 surface	surface 0-10 cm, subsurface up to 304 cm	N	N	N	Category 1 QA2
Willamette River 1998 Data	Y	WRD&M98	Sediment investigation to identify chemicals in the vicinity of the shipyard and their distribution	7, 8, 9, 10, 11	1/19/1998	1/21/1998	12 surface sediment	0-10 cm	N	N	N	Category 1 QA2
T4 Berth 416 1997 Sediment Characterization Study	N	WLCT4J97	Dredged material characterization	5, 6	10/23/1997	10/24/1997	4 subsurface sediment, 4 subsurface pore water	up to 182 cm	Y - 1 sample	Y	N	Category 1 QA1
Baseline Sediment Riedel	N	RIEDEL97	Baseline sediment assessment off Riedel's Portland Yard Site	8	8/12/1997	8/13/1997	19 subsurface sediment, 8 surface sediment	surface 0-15 cm, subsurface to 460 cm	N	N	N	Category 1 QA1
CRCO - Willamette River Channel Deepening	N	WLR0797	Dredged material characterization supporting proposed channel deepening project	1-9, 11, 12	7/22/1997	7/25/1997	18 surface sediment, 17 surface pore water, 50 subsurface sediment, 1 subsurface pore water	surface up to 25 cm, subsurface up to 609 cm	Y- 3 samples	Y - WRGC30, WRGC31	N	Category 1 QA1, grain size & conventionals Category 2
PAH in surface sediments	Y	WLCASF97	Assessment of the nature of PAH in surface sediments along the southwestern shore of Portland Harbor Superfund Site	5, 6, 7, 8, 9	6/10/1997	6/12/1997	37 surface sediment	0-10 cm	N	N	Y - Sta 1	Category 1 QA2
T4 Berths 410,411 Maintenance Dredging	N	WLCT4E97	Marine Terminal 4 Berths 410, 411 maintenance dredging	5	5/6/1997	5/6/1997	3 subsurface sediment	up to 152 cm	N	Y	N	Category 1 QA1
BP Bulk Terminal 22T Supplemental Sediment and Revetment Investigation	N	WLCBPE06	BP Bulk Terminal 22T basis of design report Revetment SCM	4.8 - 4.9	9/9/2003	6/20/2006	48 surface sediment, 66 subsurface sediment	surface up to 30 cm, subsurface up to 1,036 cm	N	Y	N	Mixture of Category 1 QA1 and Category 2
Gasco Phase 2 Offshore Investigation	N	WLCGSG07	Gasco Phase 2 offshore investigation	6.1 - 6.4	8/30/2007	10/11/2007	24 suburface sediment	up to 457 cm	N	N	N	Category 1 QA1
Gasco Phase 1 Offshore Investigation	N	WLCGSJ06	Gasco Siltronic groundwater source evaluation Phase 1 Report & P2 FSA	6.1 - 6.5	10/5/2006	6/4/2007	186 suburface sediment	up to 582 cm	N	N	N	Category 1 QA1
RI/RA Ross Island Phase 2 (Landau)	N	WLCRIF01	Substantive Response Document, RI/RA Ross Island Sand & Gravel	13.9 - 14.6	6/1/2001	6/1/2001	5 surface sediment, 5 surface pore water	0-10 cm	N	N	Y	Category 2
Sulzer Pump, 16 riparian samples	N	WLCSPLO3	Sulzer Pump, 16 riparian samples	10.2 - 10.3	12/22/2003	12/22/2003	16 surface sediment	0-15 cm	N	N	N	Category 1 NA
T4 Anchor Appendix G sediment data	N	WLCT4G06	T4 Anchor Appendix G sediment data	4.4 - 4.7	7/18/2006	12/14/2007	76 surface sediment, 68 subsurface sediment	surface up to 30 cm, subsurface up to 305 cm	N	Y - 17 samples	N	Category 1 QA1
Willbridge Terminal 2002 Post-Dredging Sediment Characterization	N	WLCWTG02	Post-dredging sediment characterization	7.6 - 7.7	7/16/2002	7/16/2002	17 surface sediment	up to 15 cm	N	N	N	Category 1 QA1
Zidell Waterfront Property RI: Riverbank Characterization	N	WLCZDH04	Zidell Waterfront property remedial investigation: riverbank characterization	13.5 - 14	8/9/2004	8/13/2004	50 surface sediment	0-15 cm	N	N	N	Category 1 QA1
Zidell Waterfront Property RI	N	WLCZDI00	Zidell Waterfront property remedial investigation	13.4 - 14.1	10/28/1997	12/10/2003	46 surface sediment, 46 suburface sediment, 19 surface pore water	surface up to 30 cm, subsurface up to 320 cm	N	N	N	Category 1 QA1
Blue Heron & West Linn	N	WLFLH07	Site investigation	21.5 - 28.5	8/28/2007	8/31/2007	19 surface sediment	0-10 cm	N	N	N	Category 1 QA2

DO NOT QUOTE OR CITE

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Table 2.0-1. Summary of Investigations Performed by Other Parties Included in the RI Data Set.

Survey Name	Used for Risk Evaluation (Y/N)	Survey ID	Study Objective	River Mile(s)	Begin Date	End Date	Number of Samples	Sample Intervals (cm)	Composite (Y/N)	Dredged (Y/N)	Capped (Y/N)	QA Category
Tissue												
ATSDR/EPA/ODHS Fish Contaminant Study	Y <sup>b</sup>	WLTASE03	Fish tissue investigation	lamprey - RM26, sturgeon - RM3.5-9.2, chinook - Clackamas Hatchery	lamprey - 5/22/2003, chinook - 6/20/2003, sturgeon - 8/11/2003	lamprey - 5/22/2003, chinook - 6/20/2003, sturgeon - 8/25/2003	4 lamprey, up to 6 chinook fillet - skin on, up to 5 chinook whole body, up to 6 sturgeon fillet - skin off	--	Y - lamprey	--	--	Category 1 QA2
Transition Zone Water												
Siltronic Supplemental In-River Transition Zone Water	Y	WLCSLH01	Transition zone water study	6.4 - 6.8	8/2/2001	6/1/2005	76 TZW samples	up to 87 ft below mudline	N	--	--	Category 1 QA2
Gasco Phase 2 Offshore Investigation	N	WLCGSG07	Gasco Phase 2 offshore investigation	6.4	10/4/2007	10/6/2007	18 TZW samples	Unknown	N	--	--	Category 1 QA1
Surface Water												
Gasco Phase 2 Offshore Investigation	N	WLCGSG07	Evaluate the potential for transport of cyanide in Site groundwater and TZW to surface water, and any conversion to free cyanide under select river conditions.	5.9-6.7	10/1/2007	10/9/2007	360 (180 unfiltered; 180 filtered) surface water samples	Near-surface, mid-depth, near-bottom	N	--	--	Category 1 QA1
Siltronic Supplemental In-River (SIR) transition zone water	N	WLCSLH01	Characterize TZW impacts to surface water .	6.4-6.5	5/16/2005	6/1/2005	22 surface water samples	1 ft above mudline	N	--	--	Category 1 QA2
City of Portland TSS Data	N	WLC1200Z	Surface water monitoring	1.1 - 20	2/1992	3/2006	2,520 composited surface water grabs	10 ft from surface	Y	--	--	none
Stormwater/Seeps												
Rhone-Poulenc Outfalls 22B and 22C Stormwater	Y <sup>b</sup>	WLCRPI04	Outfall monitoring	6.8, 6.9	10/1/1993	9/23/2004	9 samples on 7 dates	--	N	N	N	Category 1 QA2
GE Spring/Summer 2007 Stormwater Outfall Monitoring	N	WLCGED07	GE spring/summer 2007 stormwater outfall monitoring	9.6	4/18/2007	6/10/2007	4 outfall water	--	N	--	--	Category 1 QA2 Conventionals Category 2
T4 Spring 2007 Stormwater Outfall Monitoring	N	WLCT4C07	T4 spring 2007 stormwater outfall monitoring	4.2 - 5.1	3/24/2007	5/20/2007	24 outfall water	--	N	--	--	Category 1 QA1 PCB Congeners QA2
Joint Source Control Strategy	N	See Table 4.4-3	Source control evaluations under the DEQ/EPA JSCS program	2-10.8	1/28/04	3/13/08	See Table 4.4-3	--	See Table 4.4-3	--	--	Category 1 QA1 and QA2 (see Table 4.4-3)

DO NOT QUOTE OR CITE

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Table 2.0-1. Summary of Non-LWG Investigations Included in the RI Data Set.

Survey Name	Conventionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed	Reference (See Appendix A1)
Sediments												
Downtown Portland Sediment Characterization	X	X	X	X	X	X		X	X	X	Petroleum analyzed	GSI Water Solutions, Inc. 2008
Gasco EE/CA	X	X		X		X			X	X	TPH - diesel, residual range; cyanide	Anchor 2006
2005 Portland District O&M Sediment Characterization	X	X	X	X	X	X				X	TPH - gasoline, #2 diesel, motor oil	Tetra Tech 2006
ExxonMobil Beach Sediment Sheen Samples										X	Petroleum analyzed	Kleinfelder 2004a
Terminal 4 Early Action EE/CA Report	X	X		X	X	X				X	TPH - gasoline, diesel, residual range	BBL 2005
Corps Dredged Material O&M Characterization	X	X	X	X	X	X						Hart Crowser 2004
Gunderson Area 2 Sandy Beach	X	X	X	X	X				X	X	Petroleum analyzed	Kleinfelder 2004c
International Terminal Sediment Data Report	X	X	X	X	X	X						Floyd Snider McCarthy 2003
ATOFINA Phase 2 Stage 1/2 In-River Investigation	X					X					174 samples field screened for 4,4'-DDT, 40 samples lab tested for pesticides	Integral Consulting 2003
City Outfall Source Control Investigation	X	X		X		X	X			X	Diesel, lube oil	City of Portland 2004
Surface Water, Sediment, and Groundwater Sampling Report		X		X								Ecology & Environment 2003
US Moorings RI Sediment Investigation	X	X	X	X	X	X					TPH - diesel, motor oil	URS 2003a
City Outfall Pilot Project	X	X		X	X	X				X	Herbicides and petroleum also analyzed	CH2M Hill 2002
MarCom Expanded Preliminary Assessment		X	X	X							SVOCs limited to PAHs	Parametrix 2002
GATX Linnton Terminal RI	X			X					X	X	Petroleum analyzed	KHM Environmental Management 2002a
T4 Slip 3, Berth 410 Dredge Material	X	X		X	X	X						Hart Crowser 2002a
Willamette Reference Area Phase 2	X	X	X	X	X	X					5 samples analyzed for conventionals only; pore water analyzed for butyltins	Hart Crowser 2002c
Willamette Reference Area Phase 1	X				X	X				X	Petroleum also analyzed	Hart Crowser 2001a
Cargill Irving Elevator Permit Applications	X	X	X	X	X	X					Pore water analyzed for butyltins	Harding ESE 2001
T2/T5 2001 Dredge Characterization Study	X	X	X	X	X	X					Pore water analyzed for butyltins	Hart Crowser 2001b
Chevron Dredging Permit Application	X	X	X	X	X	X			X	X	Petroleum analyzed	PNG Environmental 2001
Gasco Source Control Evaluation	X	X		X					X		SVOCs limited to PAHs	Anchor 2001
McCormick & Baxter RI Phase 4	X			X							SVOCs limited to PAHs and phenols	Ecology & Environment 2001
Goldendale Aluminum Phase 2	X			X								CH2M Hill 2001a
Oregon Steel Mills Pre-Remedial Investigation Field Activities Data Report	X	X		X	X					X	Petroleum analyzed	Exponent 2001

DO NOT QUOTE OR CITE

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Table 2.0-1. Summary of Non-LWG Investigations Included in the RI Data Set.

Survey Name	Conventionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed	Reference (See Appendix A1)
Willbridge 60-in Outfall	X	X		X					X	X	Only one sample analyzed for metals; SVOCs, VOCs, and petroleum analyzed	KHM Environmental Management 2002b
UP RR Albina Yard Expanded Preliminary Assessment Data Report	X	X	X	X	X					X	Petroleum analyzed	Jacobs Engineering 2000a
Marine Finance Expanded Preliminary Assessment Data Report	X	X	X	X	X					X	Petroleum analyzed	Jacobs Engineering 2000b
T1 South Sediment Study	X	X	X	X	X	X			X		Pore water analyzed for butyltins	SEA 2000
Goldendale Aluminum Phase 1	X	X	X	X	X	X			X			CH2M Hill 2001b
Ross Island Phase I (Port)	X	X	X	X	X	X			X	X	Pore water analyzed for butyltins, petroleum analyzed	Hart Crowser 2000a
Willamette November Sediment Quality Evaluation	X	X	X	X	X	X					Pore water analyzed for butyltins	USACE 2000
T5 1999 Berths 501-503 Sediment Characterization Study	X	X	X	X	X	X					Pore water analyzed for butyltins	Hart Crowser 1999a
Ross Island Lagoon Baseline	X	X	X	X	X	X					Pore water analyzed for butyltins	Landau Associates 2000a
Ross Island Phase 1 (Ross Island Sand & Gravel)	X	X	X	X	X	X			X	X	Petroleum analyzed in subsurface only	Landau Associates 2000b
GATX Linnton Terminal ESA	X	X		X	X	X			X		VOCs not analyzed in all samples	KHM Environmental Management 1999
McCormick & Baxter RI Phase 3	X	X		X				X			SVOCs limited to PAHs and phenols; PCDD/Fs not analyzed in all samples	Ecology & Environment 2001
Willamette April Sediment Quality Evaluation	X	X	X	X	X	X		X		X	All samples also analyzed for herbicides; 2 samples analyzed for PCDD/Fs; porewater analyzed for butyltins	USACE 1999a
Portland Harbor Sediment Investigation	X	X	X	X	X	X	X	X		X	Some samples analyzed for herbicides, PCDD/Fs, PCB congeners, and butyltins; pore water analyzed for butyltins and metals	Roy F. Weston 1998
TOSCO 1999 Sediment Sampling Results	X	X		X	X	X						Exponent 1999a
Elf Atochem 1999 Willamette River	X			X		X			X			Exponent 1999b
Willbridge Terminal Facility RI	X	X		X		X			X		SVOCs sometimes limited to PAHs	KHM Environmental Management 2000
T2/T4 Sediment Study	X	X	X	X	X	X						Hart Crowser 1999c
Port of Portland T4 RI	X	X		X		X			X	X	Not all samples analyzed for metals or VOCs; petroleum analyzed	Hart Crowser 2000c
Sediment Characterization Local Sponsors' Berths (conducted with Corps)	X	X	X	X	X	X					Pore water analyzed for butyltins	Hart Crowser 1999b

DO NOT QUOTE OR CITE

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Table 2.0-1. Summary of Non-LWG Investigations Included in the RI Data Set.

Survey Name	Conventionals	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed	Reference (See Appendix A1)
International Terminals Sediment Sampling Event	X	X	X	X		X						Schnitzer Steel Industries 1998
Portland Shipyard Sed. Inv.	X	X	X	X	X	X			X		Butyltins, pesticides, and VOCs not analyzed in all samples; pore water analyzed for butyltins	SEA 1998
Portland Shipyard Env. Audit	X	X	X	X	X				X		Butyltins and VOCs not analyzed in all samples; SVOCs sometimes limited to PAHs and phthalates	Dames & Moore 1998
Willamette River 1998 Data	X	X	X	X	X						SVOCs limited to PAHs and phthalates; butyltins analyzed in 7 samples	Dames & Moore 1998
T4 Berth 416 1997 Sediment Characterization Study	X	X	X	X	X	X					Porewater analyzed for butyltins	Hart Crowser 1998
Baseline Sediment Riedel	X	X	X	X							Limited SVOCs analyses	MFA 1997
CRCO - Willamette River Channel Deepening	X	X	X	X	X	X					Pore water analyzed for butyltins	USACE 1999b
PAH in surface sediments	X			X								Battelle 2002
T4 Berths 410,411 Maintenance Dredging	X	X	X	X	X	X					Pore water analyzed for butyltins	Hart Crowser 1997
BP Bulk Terminal 22T Supplemental Sediment and Revetment Investigation	X	X		X	X	X				X	Herbicides	URS Corporation 2007
Gasco Phase 2 Offshore Investigation	X	X		X				X	X	X	Herbicides	Anchor 2008
Gasco Phase 1 Offshore Investigation	X	X		X					X		Grain size, atterburg limits	Anchor 2007
RI/RA Ross Island Phase 2 (Landau)		X	X	X	X	X				X	TPH - diesel, heavy oil; pore waters analyzed for butyltins	Landau Associates 2002
Sulzer Pump, 16 riparian samples	X	X		X						X	TPH - diesel, heavy oil; SVOCs limited to PAH	GeoDesign 2004
T4 Anchor Appendix G sediment data	X	X		X	X	X				X	TPH - diesel, heavy oil	Anchor 2008
Willbridge Terminal 2002 Post-Dredging Sediment Characterization	X	X	X	X	X	X			X			Anchor 2002
Zidell Waterfront Property RI: Riverbank Characterization		X	X	X	X						SVOCs limited to PAH	MFA 2004
Zidell Waterfront Property RI	X	X	X	X	X				X	X	TPH - diesel, heavy oil, lube oil, mineral spirits, Jet A, JP-4, kerosene, total petroleum hydrocarbons, and non-petroleum hydrocarbons	MFA 2003
Blue Heron & West Linn	X	X		X	X	X	X	X	X			Ecology and Environment, Inc. 2007

DO NOT QUOTE OR CITE

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Table 2.0-1. Summary of Non-LWG Investigations Included in the RI Data Set.

Survey Name	Conventional	Metals	Butyltins	SVOCs	PCBs	Pesticides	PCB Congeners	PCDD/Fs	VOCs	Other	Other Parameters Analyzed	Reference (See Appendix A1)
Tissue												
ATSDR/EPA/ODHS Fish Contaminant Study		X		X	X	X	X	X		X	PBDEs	ODHS, USEPA and ASTDR 2003
Transition Zone Water												
Siltronic Supplemental In-River Transition Zone Water	X	X		X					X	X	Herbicides, field measurements, lube oil, and diesel range hydrocarbons	MFA 2005
Gasco Phase 2 Offshore Investigation	X	X		X					X			Anchor 2008
Surface Water												
Gasco Phase 2 Offshore Investigation	X	X									Field parameters; free, amenable, and total cyanide; TSS; TOC; iron; and sulfides	Anchor 2008
Siltronic Supplemental In-River (SIR) transition zone water	X			X					X		Field parameters and VOCs (including naphthalene and five SVOCs)	MFA 2005
City of Portland TSS Data	X										TSS	City of Portland 2008
Stormwater/Seeps												
Rhone-Poulenc Outfalls 22B and 22C Stormwater	X	X		X	X	X		X	X	X	Herbicides, TPH - gas, diesel, and motor oil	AMEC Earth & Environmental, Inc. 2003, 2004, 2005
GE Spring/Summer 2007 Stormwater Outfall Monitoring	X	X		X	X		X			X	TPH - diesel; SVOCs limited to PAH and phthalates	AMEC Earth & Environmental, Inc. 2007
T4 Spring 2007 Stormwater Outfall Monitoring	X	X		X	X	X	X			X	Total petroleum hydrocarbons	Ash Creek Assoc. 2008
Joint Source Control Strategy	X	X		X	X	X	X			X	Analytes specific to each survey are listed in Table 4.4-3.	

Notes:

For risk evaluation and nature and extent discussions, only data collected since May 1997 are used. Sediment samples collected from dredged or capped areas are removed for risk evaluations. Risk evaluations use data with a Category 1 QA2 level of validation, and sediment samples must be collected from within the top 30.5 cm of the sediment horizon. Nature and extent discussions use data with a Category 1 QA1 or QA2 level of validation. Surface sediments represent those collected from the top 40 cm.

<sup>a</sup> Included in the BERA but not the BHHRA.
<sup>b</sup> Included in the BHHRA but not in the BERA.

- BERA - baseline ecological risk assessment
- BHHRA - baseline human health risk assessment
- EE/CA - engineering evaluation/cost analysis
- EPA - U.S. Environmental Protection Agency
- ESA - environmental site assessment
- PAH - polycyclic aromatic hydrocarbons
- PBDE - polybrominated diphenyl ether
- PCB - polychlorinated biphenyl
- PCDD/Fs - dioxins/furans
- RI - remedial investigation
- RM - river mile
- SCM - source control monitoring
- SPMD - semipermeable membrane device
- SVOC - semivolatile organic compound
- TPH - total petroleum hydrocarbons
- TSS - total suspended solids
- TZW - transition zone water
- VOC - volatile organic compound

DO NOT QUOTE OR CITE

This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.